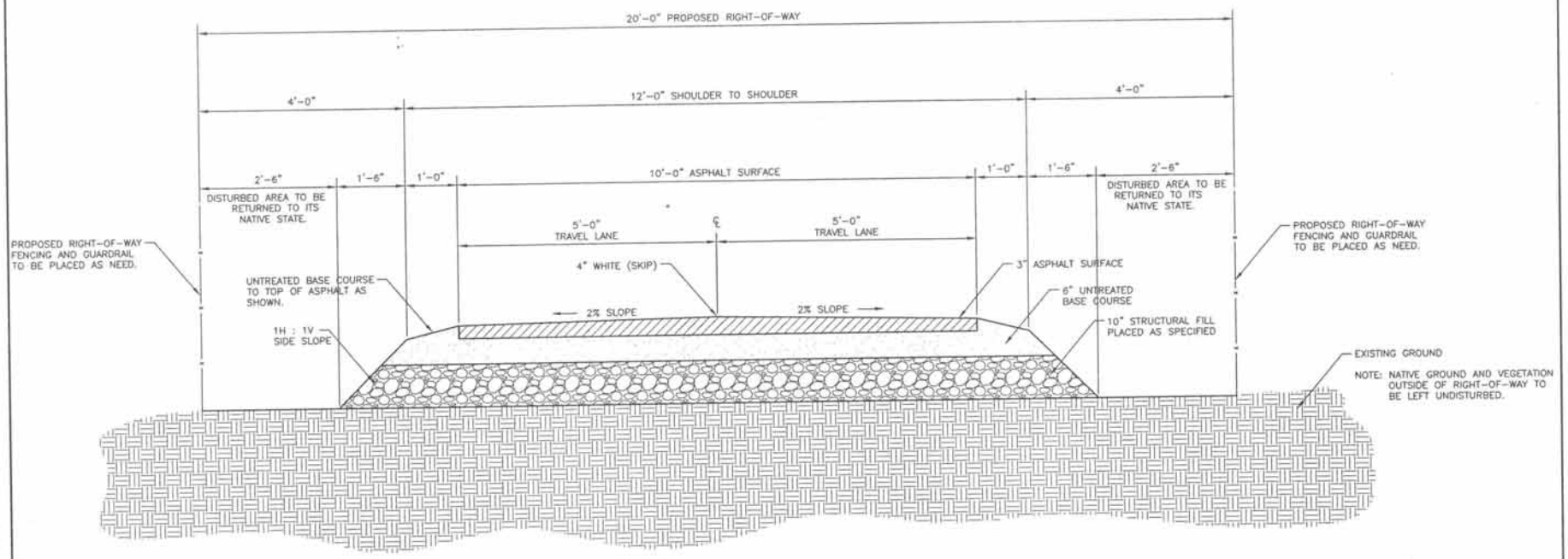
Figure 1
Utah Lake Parkway:
Location and Panel Overview Map



TYPICAL TRAIL SECTION

SCALE: 1"=3'

UTAH COUNTY

Legend

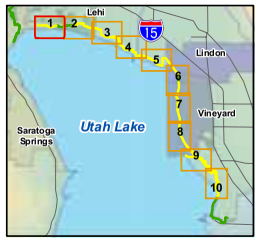
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed

Wetlands

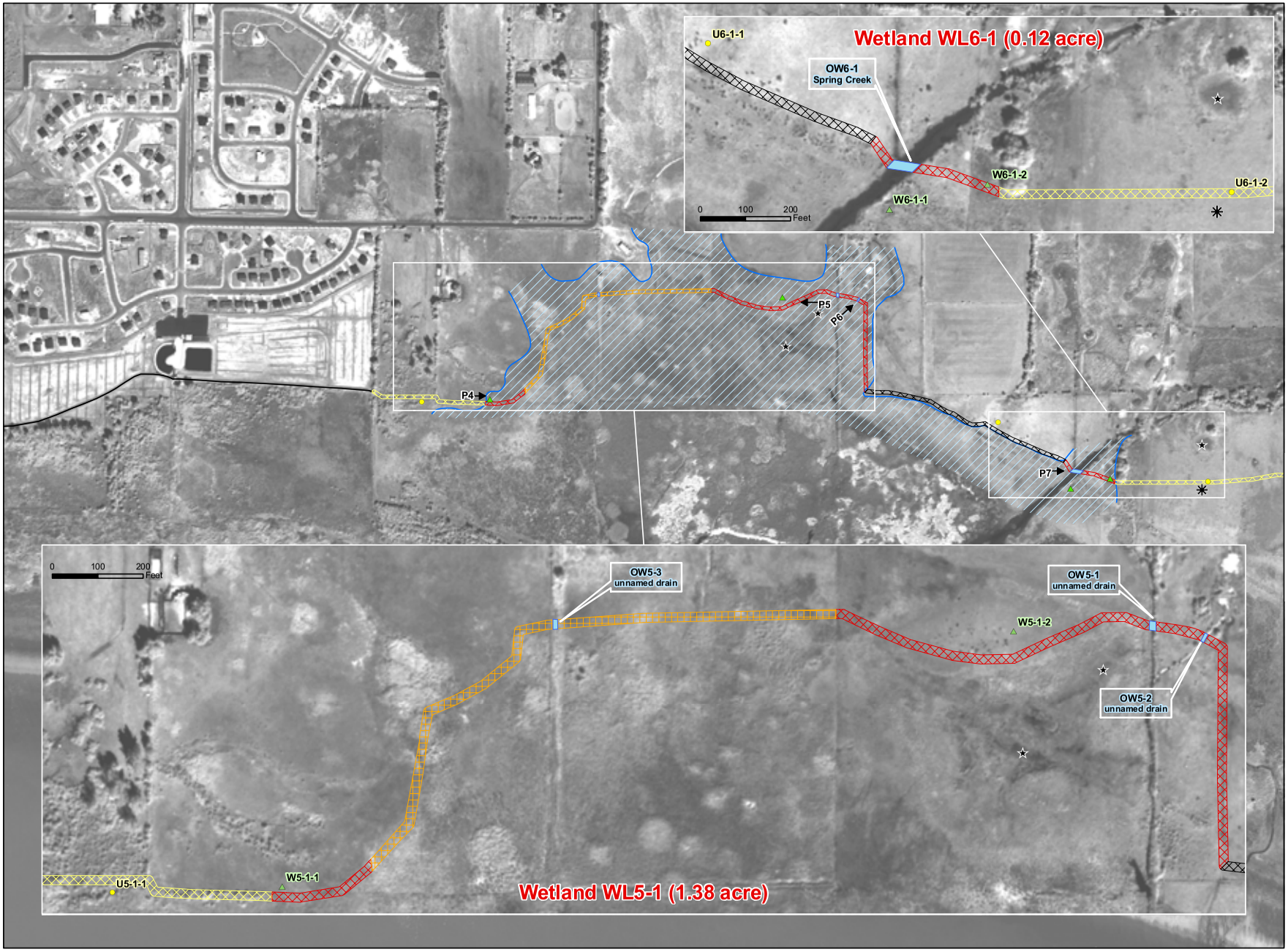
- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 1 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
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- Disturbed

Wetlands

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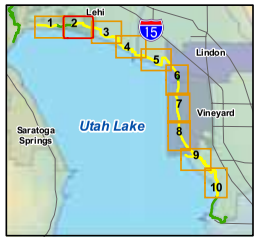
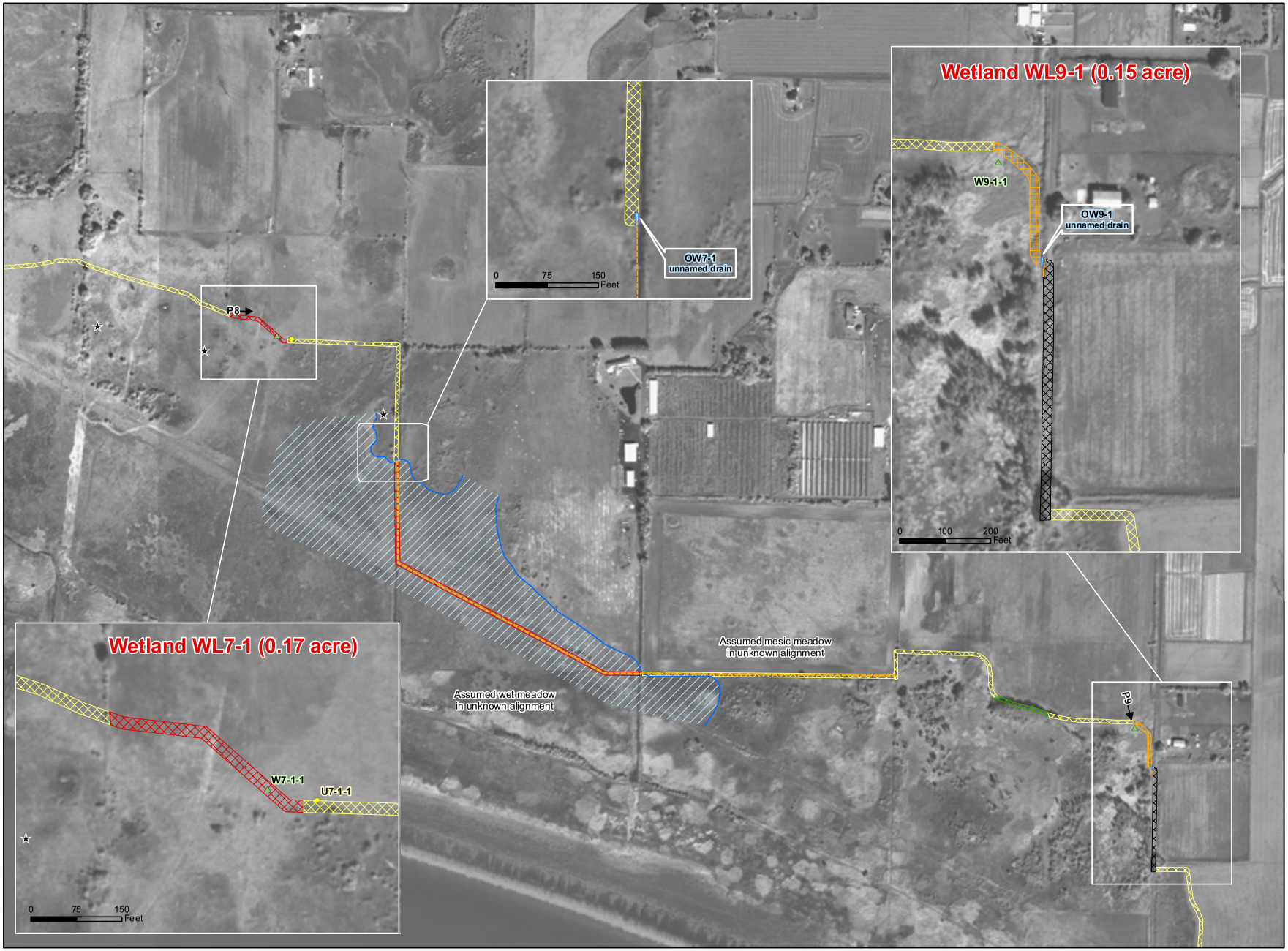
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 2 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed

Wetlands

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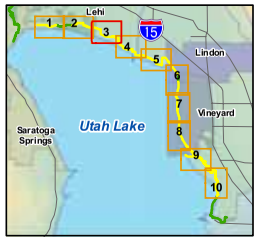
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 3 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation

Legend

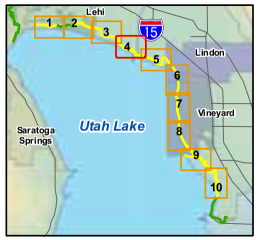
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed

Wetlands

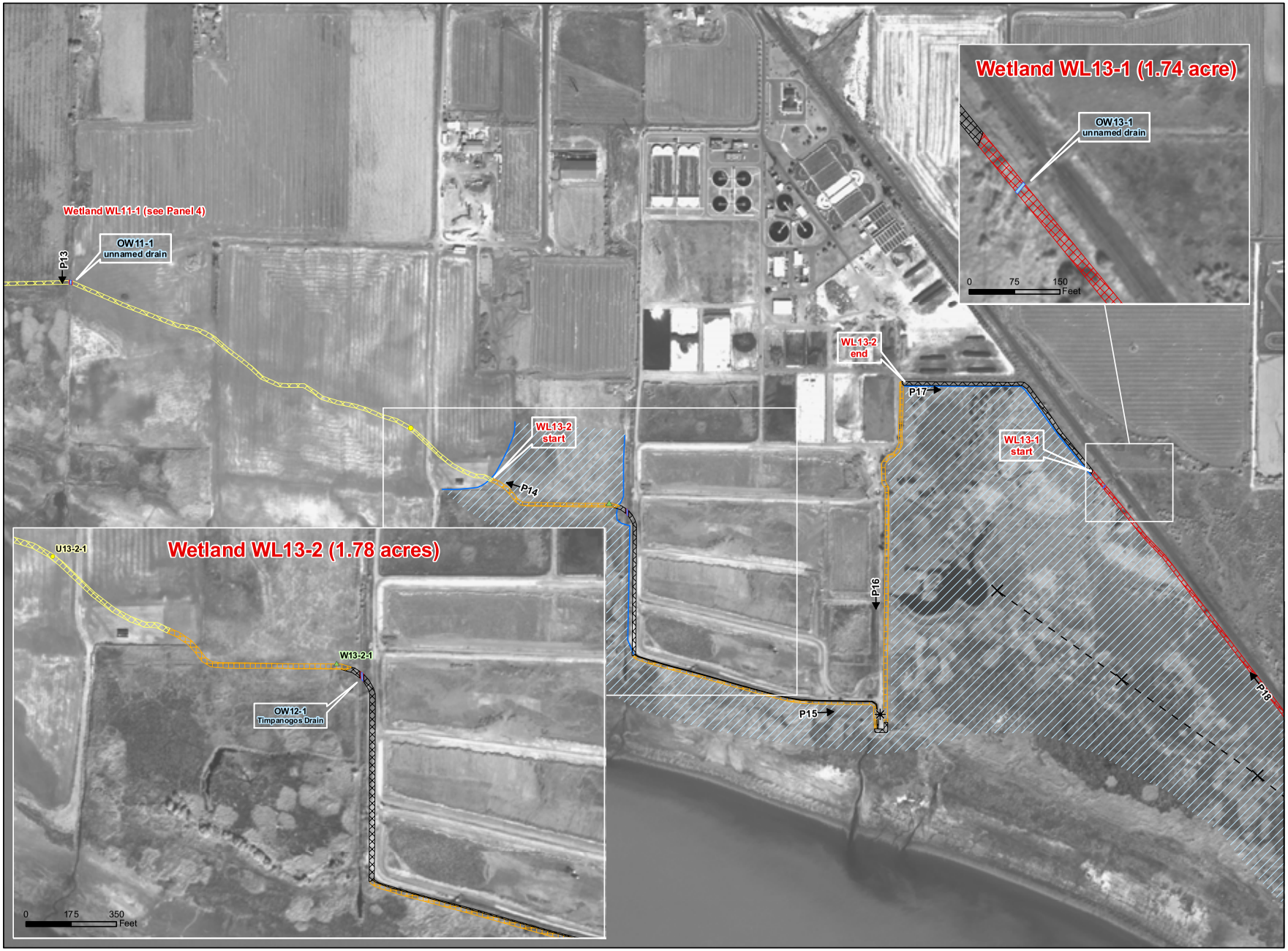
- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 4 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

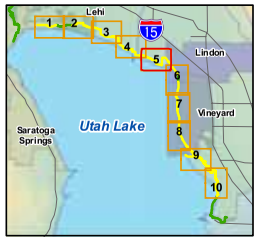
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed

Wetlands

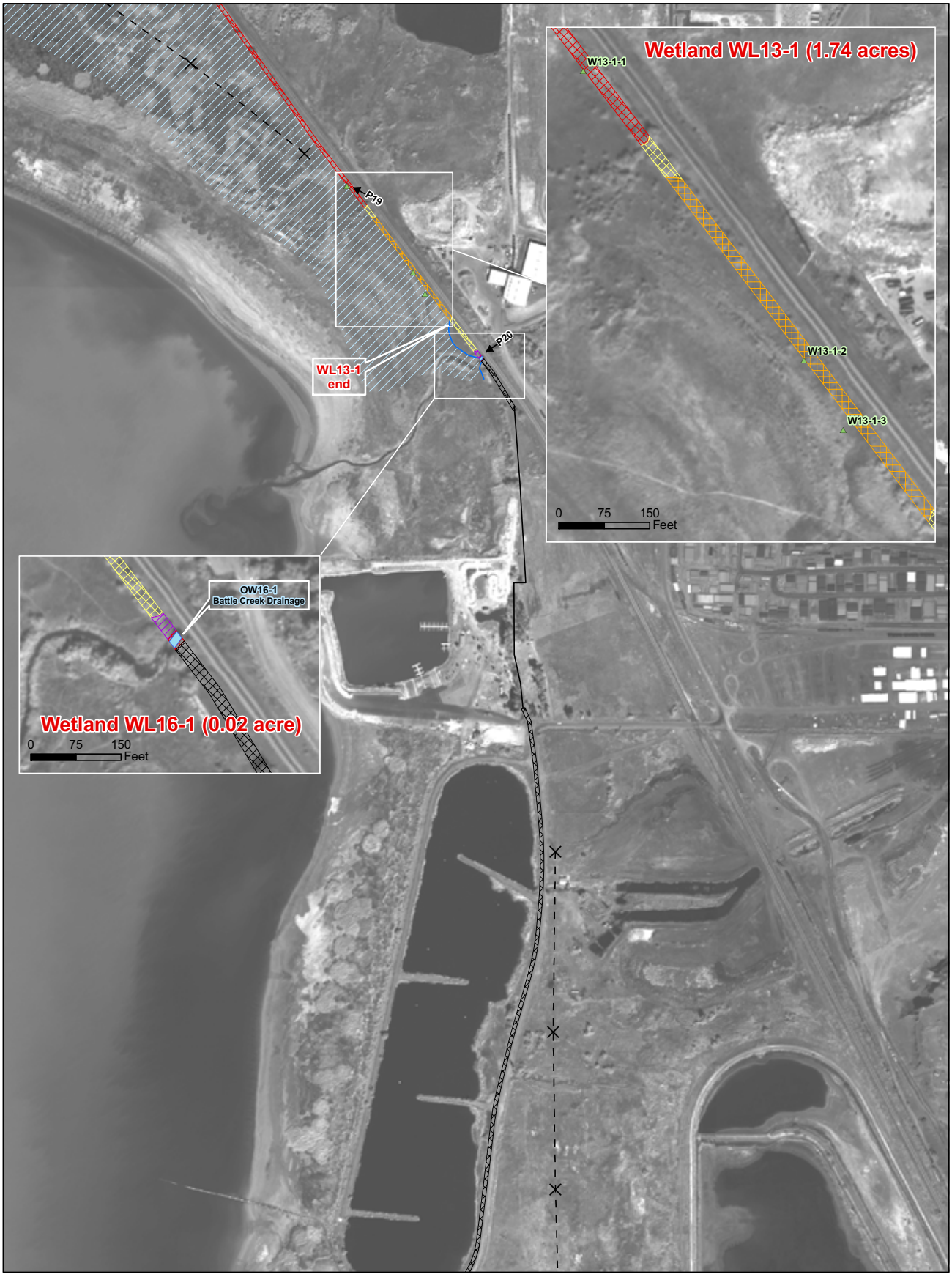
- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 5 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

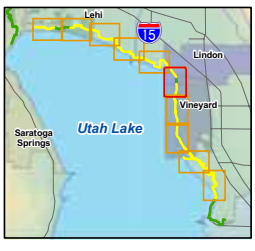
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- Potential Bog
- General Location of Interpretive Site
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed Uplands

Wetlands

- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 6 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation

Legend

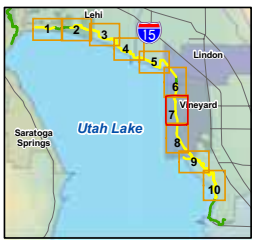
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- Potential Bog
- General Location of Interpretive Site
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed Uplands

Wetlands

- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 7 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation

Legend

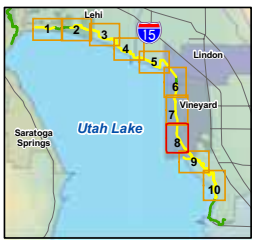
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- Potential Bog
- General Location of Interpretive Site
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed Uplands

Wetlands

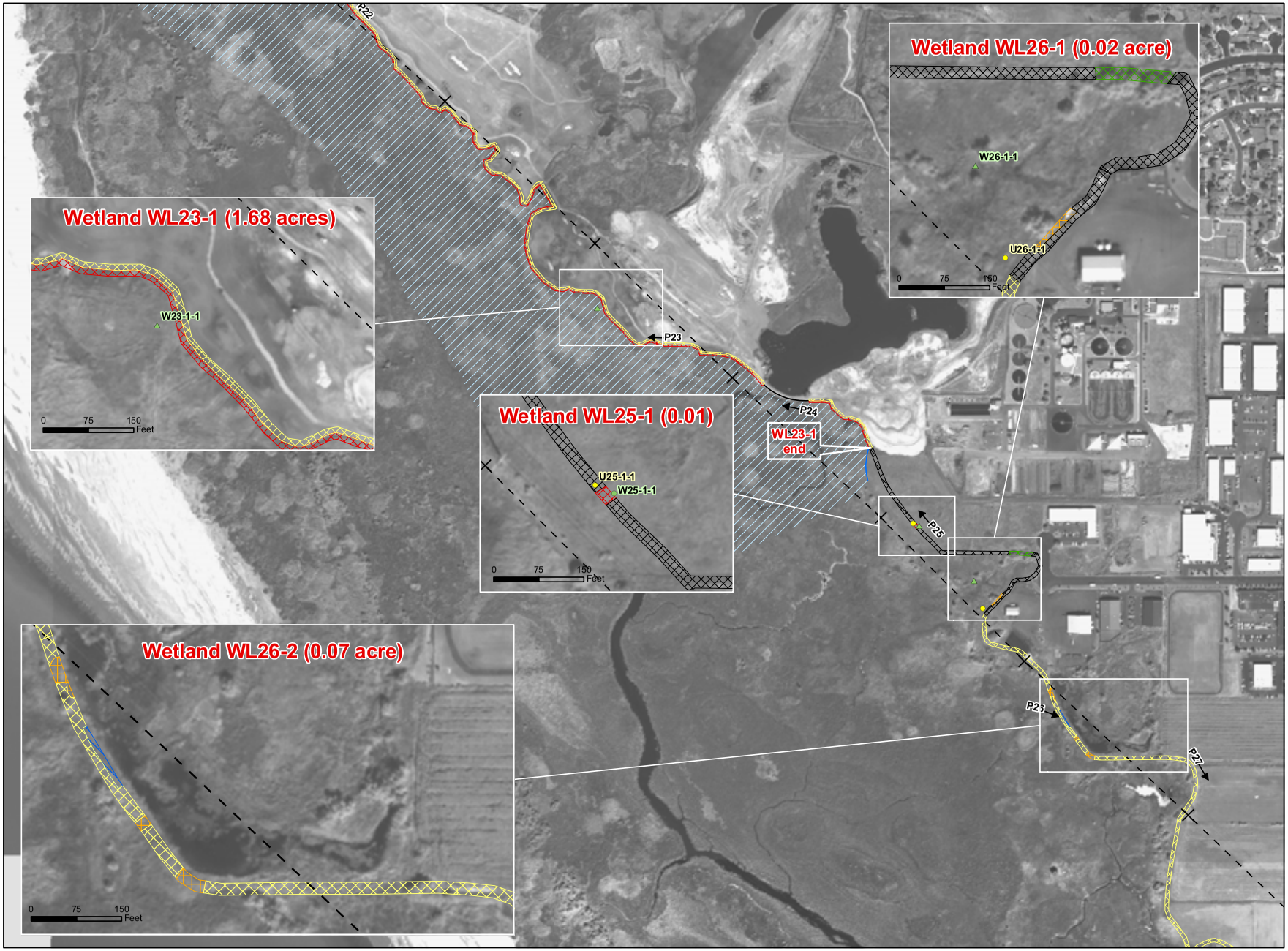
- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 8 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

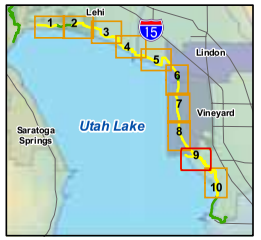
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- General Location of Interpretive Site
- Potential Bog
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed

Wetlands

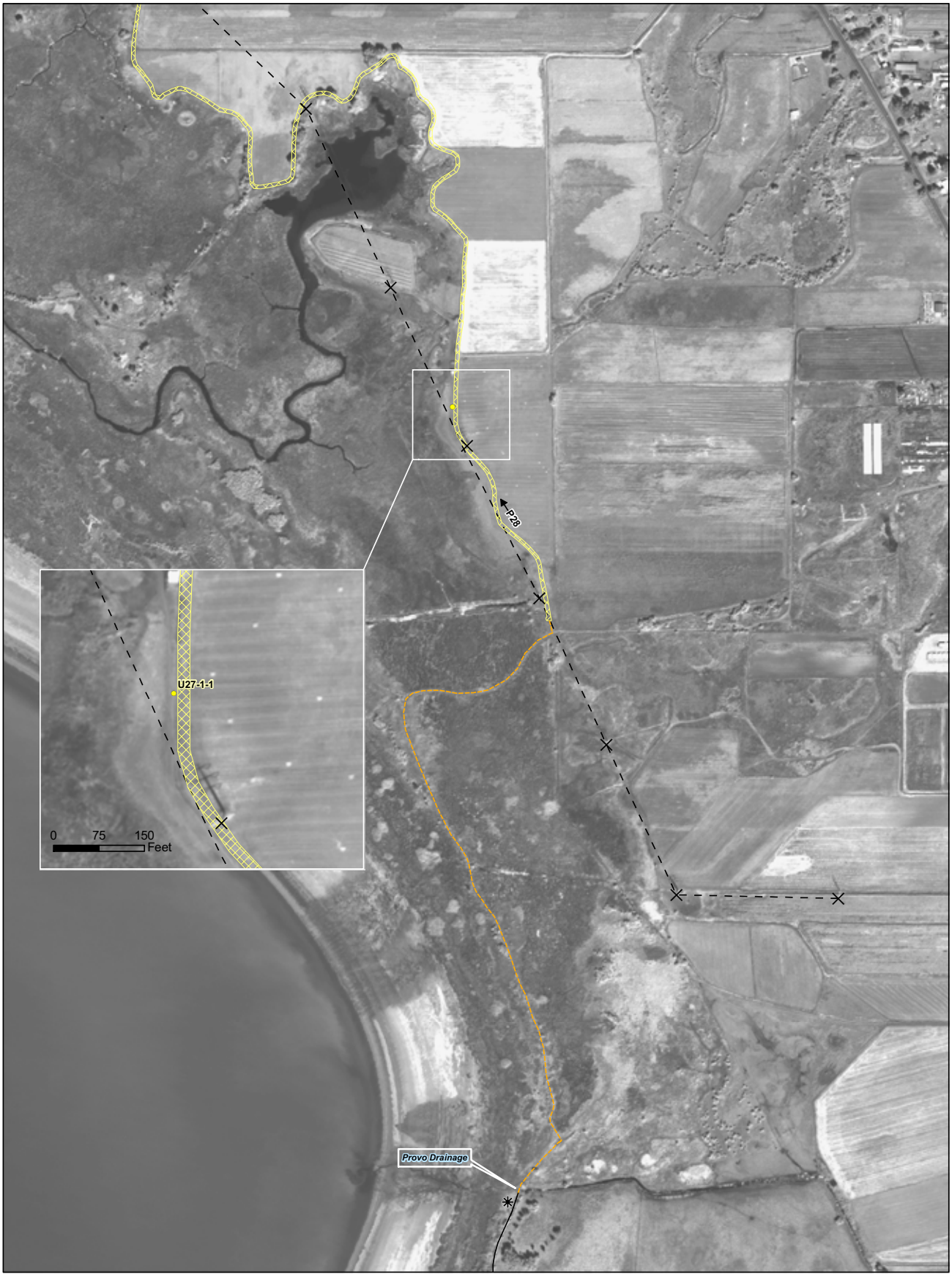
- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 9 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation



Legend

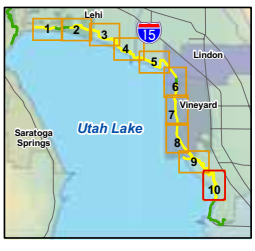
- Existing Trail
- Unknown Alignment
- Other Water Feature
- Upland Soil Pit
- Wetland Soil Pit
- Powerline
- Potential Bog
- General Location of Interpretive Site
- P1 → Photo Point

Uplands

- Riparian Woodland
- Mesic Meadow (1.50 assumed acres)
- Disturbed Uplands

Wetlands

- Wet Meadow (4.18 acres, 1.07 assumed acres)
- Shallow Marsh (2.97 acres)
- Deep Marsh (0.02 acre)
- Scrub/Shrub (0.02 acre)
- Approximate Wetland



N W E S

250 0 250 500 Feet

Panel 10 of 10
Utah Lake Parkway:
Wetlands, Other Water Features and Vegetation

Numerous actions have been taken during the planning and preliminary design process to avoid and minimize the loss of wetlands and other waters of the U.S. These include using aerial photographs and National Wetland Inventory (NWI) maps to select the original path location, using as much previously disturbed area as possible, identifying substantial reroutes based on field data, and modifying path design in wetland areas. The following text provides a summary of the specific avoidance and minimization efforts employed during project planning and design. Please refer to the Panels 1 through 10.

3.1 USE OF PREVIOUSLY DISTURBED AREAS

The use of NWI maps and aerial photographs for selection of the original path alignment allowed the County to find areas where existing roads, trails, and agricultural areas could be utilized to keep the loss of wetlands to a minimum. These locations include (discussed west to east):

- Panel 1: Approximately 3,500 feet of the path is located on an **existing farm road**; and approximately 2,000 feet is located on an **existing paved path**
- Panel 2: Approximately 2,000 feet is located on an **existing paved path**; and approximately 2,000 feet is located in **recently disturbed areas** west and east (shown as mesic meadow) of Spring Creek
- Panel 3: Nearly 2,000 feet is located along the edge of an **agricultural field**; and over 500 feet of the path is located on an **existing gravel road**
- Panel 4: Nearly 2,000 feet is located on the edge of an **agricultural field**
- Panel 5: Over 2,500 feet is on the edge of an **agricultural field**; approximately 800 feet is on an **existing gravel road** on the Water Treatment Plant property; approximately 1,000 feet is partially on an **existing gravel road**; and approximately 1,300 feet is located on an **existing gravel road** east of the Water Treatment Plant
- Panel 6: Approximately 1,500 feet is on **existing paved path**; and over 3,000 feet is on an **existing paved road**
- Panel 7: Nearly 5,000 feet is on an **existing paved road**
- Panel 8: Nearly 6,000 feet is on the edge of an **agricultural field**; approximately 2,000 feet is on the edge of the **recently disturbed golf course**
- Panel 9: Approximately 4,000 feet is on the edge of the **recently disturbed golf course**; and nearly 200 feet is on **existing paved path**; approximately 500 feet is on an **existing gravel** road near Wetland 26-1; and over 1,000 feet is on an **old double-track/social trail** through Wetland 26-2; over 1,000 feet is on the edge of an **agricultural area**
- Panel 10: Over 5,000 feet is on the edge of **agricultural fields**

3.2 REROUTES

Numerous reroutes were made after completing the first phase of the wetland delineation field work since the project team was able to gain an understanding the quantity and quality of wetlands actually present on and near the proposed alignment. The current location of the path was generally selected to avoid and minimize impacts to higher quality wetlands (deep marsh

and scrub/shrub communities) and to avoid suitable federally listed species habitat. Specific reroutes include (discussed west to east):

- Panel 1: The path on this panel was rerouted in two locations to avoid and minimize losses to wetlands. These reroutes include moving approximately 400 feet of the trail just east of the Unnamed Drain (OW2-1) up-gradient to **avoid** wet meadow and moving another 700 feet of trail up-gradient to **minimize** losses to Wetland 3-1 and Saratoga Drain (OW2-2). The 700-foot realignment resulted in a right-angle crossing of the Saratoga Drain and **avoidance** of deep marsh.
- Panel 2: Approximately 400 feet of the path was moved north to **avoid** wet meadow and shallow marsh; nearly 3,000 feet was moved north to **avoid** the deep marsh portions of Wetland 5-1; approximately 1,000 feet was moved north into a disturbed area to **minimize** wet meadow and shallow marsh impacts west of Spring Creek; and approximately 1,000 feet was moved north to **minimize** impacts to wet meadow and shallow marsh east of Spring Creek.
- Panel 3: Nearly 3,000 feet of the path was moved north to **minimize** impacts to wet meadow in the vicinity of Wetland 7-1; and nearly 4,000 feet was moved north to **avoid** shallow marsh associated with Utah Lake to the southwest and south of Wetland 9-1
- Panel 4: Nearly 4,000 feet of the path was moved north to **avoid** wetlands associated with Utah Lake in the area west of American Fork Drain (OW10-1); and approximately 600 feet of the path was moved north to **avoid** shallow marsh and wet meadow west of Wetland 11-1
- Panel 5: Over 2,500 feet of the path was moved north to **avoid** wet meadow and shallow marsh associated with the lake between Wetland 11-1 and 13-2; and nearly 5,000 feet was rerouted to **avoid** high quality deep marsh east of the Water Treatment Plant (Wetlands 13-1 and 13-2)
- Panel 6: No reroutes
- Panel 7: No reroutes
- Panel 8: Nearly 3,000 feet of the path was moved up-gradient to **minimize** impacts to shallow marsh west of the golf course (Wetland 23-1)
- Panel 9: Nearly 4,000 feet of the path was moved up-gradient to **minimize** impacts to shallow marsh west of the golf course (Wetland 23-1); approximately 1,000 feet was moved to **minimize** impact to Wetland 26-1
- Panel 10: Approximately 500 feet was rerouted near the south end of the project to **avoid** wet meadow

3.3 PATH DESIGN

In order to further avoid and minimize the loss of wetlands and other waters of the U.S., several modifications were made to the path design. These include:

- The width of the path has been kept to the minimum possible to allow for proper maintenance.

- Where the Parkway passes through wetlands, culverts will be placed every 50 to 100 feet to avoid inadvertent hydrologic modifications.
- All waters of the U.S. will be bridged or culverted
- All culverts will be sized to allow passage of a 25 year flood event.

4.1 MITIGATION MEASURES DURING CONSTRUCTION

The following mitigation measures will be employed during construction to avoid and minimize impacts to wetlands and other waters of the U.S. in and near the project area:

- In wetland areas, the construction footprint will be fenced with 4-foot orange construction fence to avoid unnecessary impacts to adjacent areas
- BMPs will be used during all phases of stabilization and construction to reduce impacts from sedimentation and erosion, which may include berms, brush barriers, check dams, erosion control blankets, filter strips, sandbag barriers, sediment basins, sheet mulching, silt fences, straw-bale barriers, surface roughening and/or diversion channels.
- No equipment will be staged and no construction materials (including fill) will be stored within 50 feet of wetlands or other water features.
- All construction staging areas will be approved by the project biologist.
- No chemicals, such as soil stabilizers, dust inhibitors and fertilizers will be used within 50 feet of wetlands or other water features.
- Equipment will be refueled in designated contained areas, at least 50 feet away from wetlands or other water features.
- When crossing through wetlands, the Parkway will be constructed with a minimum of one culvert every 50 to 100 feet in wetland areas to avoid inadvertent hydrologic modifications.
- All temporarily disturbed wetlands will be returned to original contours and conditions. This may involve minor earthwork, planting, and/or seeding.